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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,907	01/18/2002	Willie Stroup	02514.0007.NPUS01	5808

22930 7590 08/20/2004

HOWREY SIMON ARNOLD & WHITE LLP
ATTEN: MARGARET P. DROSOS, DIRECTOR OF IP ADMIN
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EXAMINER	
MENON, KRISHNAN S	
ART UNIT	**PAPER NUMBER**
1723	

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,907	STROUP, WILLIE	
	Examiner	Art Unit	
	Krishnan S Menon	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-15 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 1-5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riise (US 4,632,764) in view of Bussey Jr et al (US 6,385,791 B1).

Riise teaches an apparatus for reducing liquid in a liquid-solid mixture comprising a holding chamber (col 2 lines 7-63; figures) having four walls and a floor, made of concrete (col 3 line 40) and having vehicular access (abstract; col 3 lines 54-60); conduit for directing liquid away (col 4 lines 1-12, 20-30), a filter separating the chamber and conduit (col 4 lines 1-12), a membrane forming an airtight cover (55-fig 5, col 7 lines 14-31), and means for reducing pressure in the conduit (col 4 lines 1-12).

Riise provides vehicular access (see col 3 lines 54-60) but does not specifically teach a "ramp" for vehicular access. However, the vehicular access provided would be equivalent because the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000)

Riise also does not teach an airtight membrane which is in contact with the liquid and solids mixture. Bussey teaches a substantially airtight membrane covering a body of liquid, and which is in contact with the liquid surface (see figures). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Bussey in the teaching of Riise to have a cover that is in contact with the liquid-solid mixture surface to prevent evaporation of the liquid, and to provide solar energy heating as taught by Bussey (col 2 lines 65-68, col 1 lines 1-23) and Riise (col col 7 lines 14-31)

Claims 2-5 add the further limitation of heating means, see col 2 line 38-45, fig 4a; col 5 lines 44-50; col 6 lines 1-33). Claim 5 – heating means disposed in membrane – col 7 lines 14-30

2. Claims 6-8, and 12-15 are rejected under 35 USC 103 (a) as being unpatentable over Riise (US 4,632,764) in view of Bussey Jr et al (US 6,385,791 B1) as in claim 2 above and further in view of Winter et al (US 5,277,814)

Instant claims add further limitations which Riise in view of Bussey does not teach, but Winter teaches as follows: The apparatus further comprises air injectors disposed within the chamber as in instant claims 6 and 7 (col 5 lines 60-68; col 2 lines 27-40); temperature monitoring and control means as in instant claims 12 and 13 and the temperature is maintained between 100 and 200 °F (col 2 lines 62-68; col 7 lines 17-40) as in instant claim 15. It would be obvious to one of ordinary skill in the art at the time of invention to use the teachings of Winter in the teaching of Riise in view of Bussey to provide means for monitoring the temperature and providing aeration when

the solid liquid mixture to be treated is water containing organic wastes as taught by Winter (see abstract), and for providing air for loosening up the accumulation as taught by Riise (col 7 lines 42-45)

Re claims 8, Riise also teaches air injection (col 7 lines 42-45; col 9 line 64) through the membrane. Regarding claim 14, see In re Lindberg, 194 F.2d 732, 93 USPQ 23 (CCPA 1952) (Fact that a claimed device is portable or movable is not sufficient by itself to patentably distinguish over an otherwise old device unless there are new or unexpected results.).

3. Claims 9-11 are rejected under 35 USC 103(a) as unpatentable over Riise (US 4,632,764) in view of Bussey Jr et al (US 6,385,791 B1) and Winter (814) as applied to claim 8 above, and further in view of Eichler (US 5,118,427).

Riise and Winter teaches agitating (Riise – col 6 lines 20-33; col 9 line 60-64; Winter: col 2 line 29), but Riise in view of Bussey and Winter doe not teach vibrating means for agitating the mixture as in claim 9. Eichler (427) teaches vibrating means for agitating (col 3 lines 17-45). It would be obvious to one of ordinary skill in the art at the time of invention to vibrate the membrane as taught be Eichler in the teachings of the separating apparatus of Riise in view of Bussey and Winter in view of Winter to keep the liquid mixture viscosity low for faster removal of liquids.

Re claims 10 and 11, Riise teaches moisture collection tank (col 4 lines 1-11), and Winter teaches moisture collecting tank disposed to receive liquids as in instant claims 10 and 11 (14,15 and 23 fig 1).

Response to Arguments

Applicant's arguments filed 7/2/04 have been fully considered but they are not persuasive.

In response to the applicants' argument that the cited prior arts do not teach 'squeeze the contents of the chamber ... into the conduit and out the chamber', please see col 4 lines 1-12 of Riise ref, which describes uniform vacuum, which is in tune with the claimed element – last three lines of claim 1. The argument about 'squeeze the contents of the chamber' is not commensurate with what is claimed; more over, it is functional language not patentable in an apparatus claim if added to the claim, and the secondary ref does provide the squeeze function.

In response to the applicants argument re the secondary ref Bussey that (1) it is non-analogous art because it teaches a swimming pool cover, whereas the claimed invention is for sludge dewatering, and (2) there is no reason to combine:

(1) nonanalogous art: The claims recite an air tight membrane in substantial contact with the liquid and solid mixture over the chamber. Primary ref Riise teaches all the limitations of the claim except this membrane. However, primary reference teaches heating the chamber and *contemplates on solar heating with air pollution control.* (col 2 lines 46-53). Bussey ref is about a swimming pool cover, which stays in contact with the liquid surface in the pool and provides solar heating without evaporation. Applicants claim heating means in claims 2-5, with claim 5 reading the heating means as disposed in the membrane. The means plus function language of the claims revoke 35 USC 112 paragraph 6; therefore, the means must be what is described in the specification or

equivalents thereof; the language in the specification reads: "The heating element may be an electric resistive heating element, a gas heater, or any other suitable heating means." (page 16, 3rd para) Since the Bussey ref teaches an airtight membrane that is in contact with the liquid surface and which has heating means (solar heating through the membrane, which the examiner considers as equivalent), the art of the Bussey ref, if not analogous, is reasonably pertinent to the particular problem the inventor is involved. Re the question of what is analogous art, even though the claimed invention may be applicable to dewatering sludge, it contains subject matter as diverse as filtration membranes, vacuum filtration, air-tight membrane covers, heating, and drying. Naturally, one of ordinary skill in the art would look in to the art of heating elements for providing heating means for the chamber, and art of membrane covers for providing the airtight membrane. The art of Bussey includes art such a air tight membrane covers. Therefore, the arts are analogous.

(2) No suggestion to combine: Again, Riise contemplates on using solar heat without air pollution, Bussey provides solar heating without water loss by having an air-tight membrane cover, which is a good motivation to combine. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon
Patent Examiner

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